

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

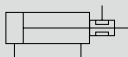


Brake cylinder double acting/single rod

ULKP Series

● Bore size : $\varnothing 16$

JIS symbol ● Double acting cylinder with brake



Made-to-order product



Specifications

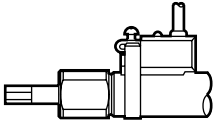
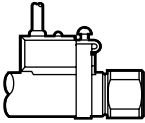
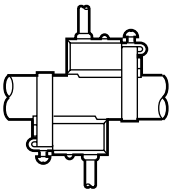
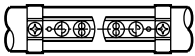
Item	ULKP/ULKP-L	
Actuation	Double acting	
Working fluid	Compressed air	
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)	
Min. working pressure MPa	Cylinder section: 0.15 (≈22 psi, 1.5 bar) Brake section: 0.3 (≈44 psi, 3 bar)	
Proof pressure MPa	1.6 (≈230 psi, 16 bar)	
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)	
Bore size mm	$\varnothing 16$	
Port size	M5	
Stroke tolerance mm	$^{+1.0}_0$	
Working piston speed mm/s	50 to 500	
Cushion	Rubber cushion	
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)	
Holding force N	160	

Stroke length

Model No.	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ULKP/ULKP-L	15/30/45/60	260	5

* For types with switch, minimum stroke length varies depending on mounting method. Refer to the table below for details.
The custom stroke length is available in 1 mm increments.

Min. stroke length with switch

Sketch	1		2	
				
	Rod side mounting	Head side mounting	Different surface mounting	Same surface mounting
Min. stroke length	5 mm		10 mm	28 mm

Switch specifications

Item	Proximity 2-wire		Proximity 3-wire		
	M2V	M2WV (2-color display)	M3V	M3PV (Made to order)	M3WV
Applications	Programmable controller		For programmable controller, relay, IC circuit, compact solenoid valve		
Output method	-		NPN output	PNP output	NPN output
Power supply voltage	-		4.5 to 28 VDC		10 to 28 VDC
Load voltage	10 to 30 VDC		30 VDC or less		
Load current	5 to 30 mA		100 mA or less	100 mA or less	100 mA or less
Indicator lamp	LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)
Leakage current	1 mA or less		10 μ A or less	0.05 mA or less	10 μ A or less
Weight	g 1 m:22 3 m:57 5 m:93				

Item	Reed 2-wire	
	M0V	M5V
Applications	Programmable controller, relay	For programmable controller, relay IC circuit (without indicator), serial connection
Power supply voltage	-	-
Load voltage/ current	5 to 50 mA with 12/24 VDC, 7 to 20 mA with 110 VAC	50 mA or less with 12/24 VDC, 20 mA or less with 110 VAC
Indicator lamp	LED (Lit when ON)	Without indicator lamp
Leakage current	0 mA	
Weight	g 1 m:22 3 m:57 5 m:93	

*1 : Refer to Ending Page 1 for other switch specifications.

*2 : Dimensions depend on switch model No. Refer to Ending Page 13 for details.

Product weight

(Unit: g)

Item	Stroke length (mm)	ULKP-16
Without switch	15	138
	30	143
	45	148
	60	153
With switch (with 2 switches)	15	186
	30	191
	45	196
	60	201
Switch mounting bracket		2
Switch weight (per switch)		Refer to the weight in the switch specifications.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø16	Push	30.2	40.2	60.3	80.4	101	121	141	161	181	201
	Pull	27.2	36.3	54.4	72.6	90.7	109	127	145	163	181

LCM
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LCG
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STR2
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ULK*
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JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

How to order

Without switch (without magnet for switch)

ULKP — 00 — 16 — 60 — 0 — Y

With switch (built-in magnet for switch)

ULKP-L — 00 — 16 — 60 — 0 — M2V — R — Y

H Accessory

A Model

B Mounting

C Bore size

D Stroke length

E Head side port direction

F Switch model No.

G Switch quantity
*3

⚠ Precautions for model No. selection

*1 : Refer to page 674 for the min. stroke length with switch.

*2 : The CB mounting is not available for port direction/axial direction.

*3 : "I" and "Y" cannot be selected together.

[Example of model No.]

ULKP-L-00-16-60-0-M2V-R-Y

A Model : Brake cylinder with switch double acting

B Mounting : Basic

C Bore size : $\phi 16$

D Stroke length : 60 mm

E Head side port direction : Axial direction

F Switch model No. : Proximity switch, lead wire length: 1 m

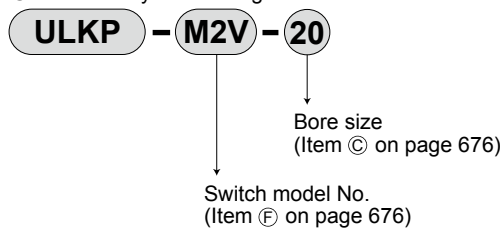
G Switch quantity : 1 on rod side

H Accessory : Rod clevis

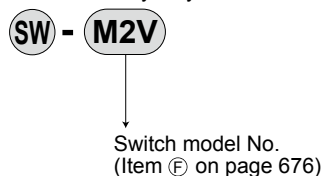
Code	Description			
A Model				
ULKP	Double acting			
ULKP-L	Double acting with switch			
B Mounting				
00	Basic			
LS	Axial foot (single) (rod side)			
FA	Rod side flange			
CB	Clevis bracket			
C Bore size				
16	ø16			
D Stroke length				
Bore size	Stroke length *1	Custom stroke length		
ø16	5 to 260	In 1 mm increments		
E Head side port direction				
Blank	Vertical			
0	Axial direction (*2)			
F Switch model No.				
Radial lead wire	Contact	Voltage AC DC	Display	Lead wire
M0V*	Reed	● ●	1-color display	2-wire
M5V*		● ●	Without indicator lamp	
M2V*	Proximity	●	1-color display	
M2WV*		●	2-color display	
M3V*		●	1-color display	3-wire
M3WV*		●	2-color display	
M3PV*		●	1-color display (made to order)	
* Lead wire length				
Blank	1 m (standard)			
3	3 m (option)			
5	5 m (option)			
G Switch quantity				
R	1 on rod side			
H	1 on head side			
D	2			
T	3			
H Accessory				
I	Rod eye			
Y	Rod clevis (pin, washer, split pin attached)			
B1	Eye bracket			
B2	Clevis bracket (pin, snap ring attached)			

How to order switch

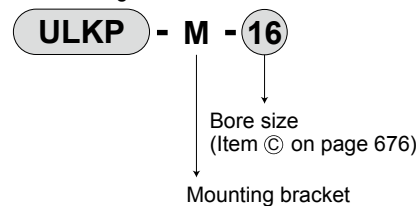
- Switch body + mounting bracket set



- Switch body only



- Mounting bracket set



How to order mounting bracket

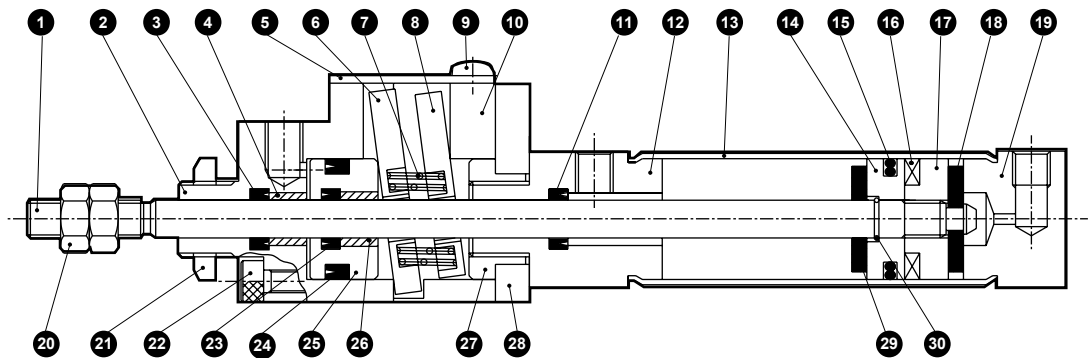
Bore size (mm)	ø16
Mounting bracket	
Foot (LS)	P2-LS-16
Flange (FA)	P2-FA-16

*1 : The foot mounting bracket is provided as 1 pc./set.

LCM
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UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
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LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCM
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LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
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JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
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Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list



Cannot be disassembled

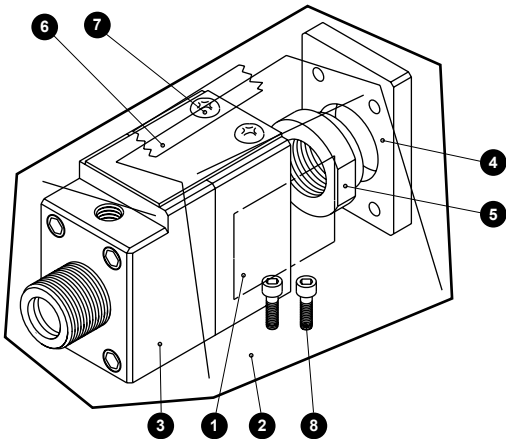
* This product cannot be disassembled.

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Piston rod	Stainless steel		16	Magnet	Plastic (With switch only)	
2	Body A	Aluminum alloy	Alumite	17	Spacer	Aluminum alloy	
3	Brake rod packing	Nitrile rubber		18	Cushion rubber H	Urethane rubber	
4	Bearing	Acetal resin		19	Head cover	Aluminum alloy	Hard alumite
5	Cover	Aluminum alloy	Alumite	20	Rod nut	Steel	Nickeling
6	Brake plate A	Copper alloy		21	Hexagon nut	Steel	Nickeling
7	Brake spring	Piano wire		22	Hexagon socket head cap screw	Steel	
8	Brake plate B	Copper alloy		23	Release rod packing	Nitrile rubber	
9	Cross-recessed pan head machine screw	Steel	Zinc chromate	24	Release piston packing	Nitrile rubber	
10	Body B	Aluminum alloy	Alumite	25	Release piston	Aluminum alloy	Alumite
11	Rod packing	Nitrile rubber		26	Release piston bearing	Acetal resin	
12	Rod cover	Aluminum alloy	Hard alumite	27	Fixing nut	Steel	Zinc chromate
13	Cylinder tube	Stainless steel		28	Brake flange	Steel	Zinc chromate
14	Piston	Aluminum alloy		29	Cushion rubber R	Urethane rubber	
15	Piston packing	Nitrile rubber		30	Retaining ring	Stainless steel	

Configurations table

● Brake unit

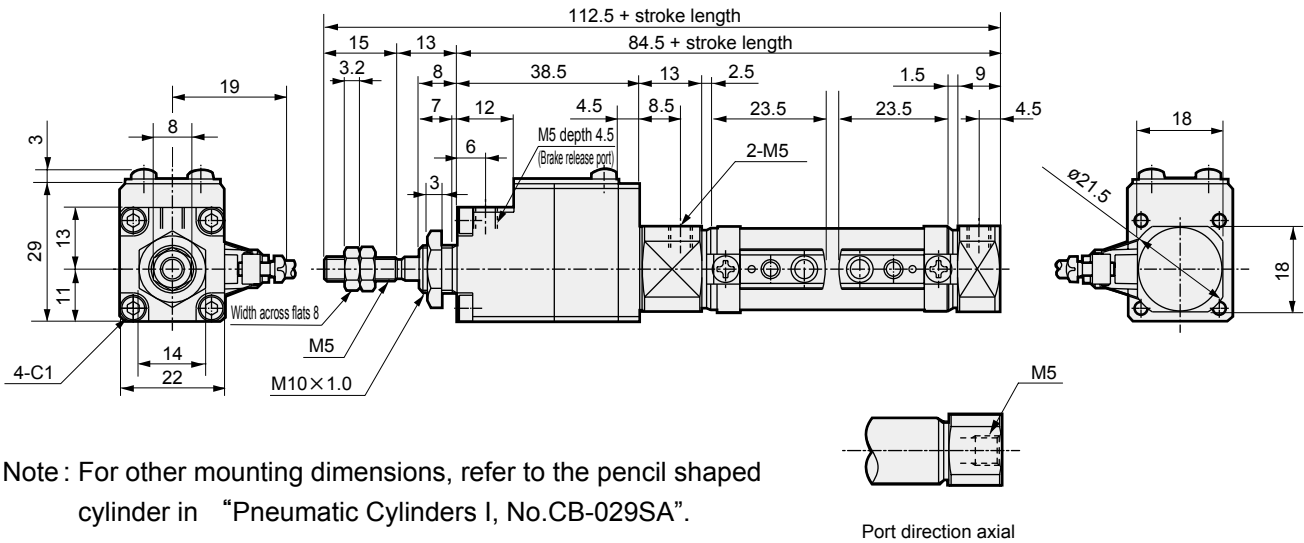
ULKP - 16 - BRAKE-UNIT



No.	Part name	Quantity
1	Label	1
2	Plastic sheets or plastic bag	1
3	Brake assembly	1
4	Brake flange	1
5	Fixing nut	1
6	Cover	1
7	Cross-recessed pan head machine screw	2
8	Hexagon socket head cap screw	2

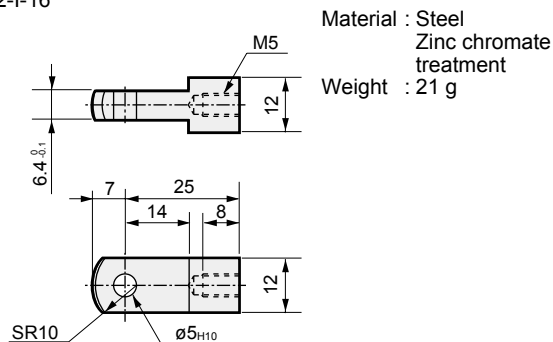
Dimensions

● ULKP-*-00-16

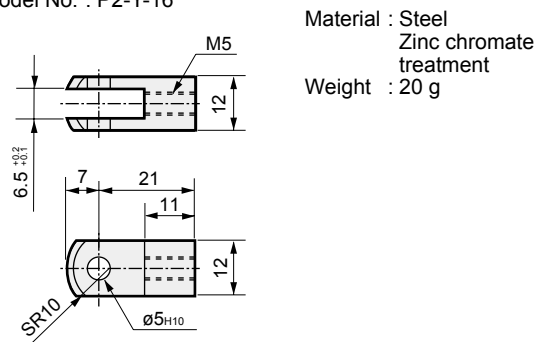


Accessory dimensions

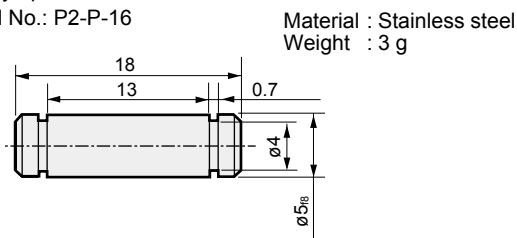
● Rod eye (I)
Model No. : P2-I-16



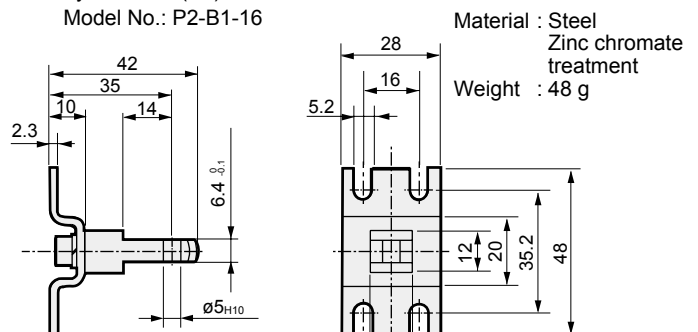
● Rod clevis (Y)
Model No. : P2-Y-16



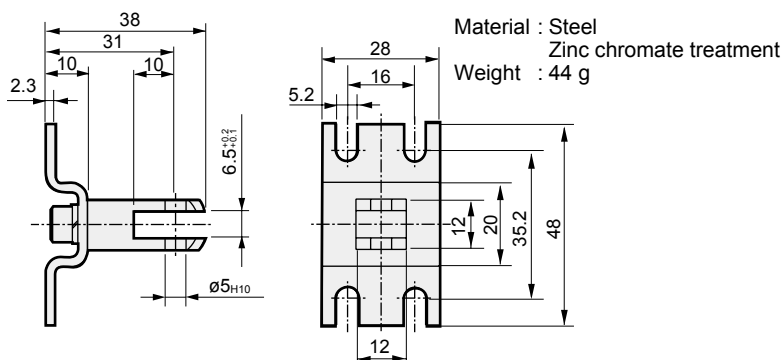
● Rod eye pin
Model No.: P2-P-16



● Eye bracket (B1)
Model No.: P2-B1-16

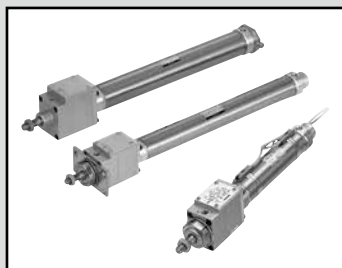


● Clevis bracket (B2)
Model No.: P2-B2-16



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STS/STL
STR2
UCA2
ULK*
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JSG
JSC3/JSC4
USSD
UFCD
USC
UB
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LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
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RCS2
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PCC
SHC
MCP
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Ending

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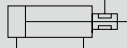
Brake cylinder Double acting, double acting/with valve for brake

ULK/ULK-V Series

● Bore size: ø20/ø25/ø32/ø40

JIS symbol

● Double acting



Specifications

Item		ULK				ULK-V					
Bore size		mm	ø20	ø25	ø32	ø40	ø20	ø25	ø32	ø40	
Actuation			Double acting				Double acting/with valve for brake				
Working fluid			Compressed air								
Max. working pressure			MPa				1.0 (≈150 psi, 10 bar)				Cylinder section: 1.0 (≈150 psi, 10 bar) Brake section: 0.6 (≈87 psi, 6 bar)
Min. working	Brake section	MPa	0.3 (≈44 psi, 3 bar)								
pressure	Cylinder section	MPa	0.15 (≈22 psi, 1.5 bar)								
Proof pressure			MPa				1.6 (≈230 psi, 16 bar)				
Ambient temperature			°C				-10 (14°F) to 60 (140°F) (no freezing)				-10 (14°F) to 50 (122°F) (no freezing)
Port size	Brake section		Rc1/8								
	Cylinder		Rc1/8								
Stroke tolerance			mm				$\begin{smallmatrix} +2.0 \\ 0 \end{smallmatrix}$ (to 200)				$\begin{smallmatrix} +2.4 \\ 0 \end{smallmatrix}$ (201 to)
Working piston speed			mm/s				50 to 500				
Cushion			Rubber cushion								
Lubrication			Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)								
Holding force			N	251	393	643	1005	251	393	643	1005
Allowable absorbed energy			J	0.166	0.308	0.424	0.639	0.166	0.308	0.424	0.639

Note: Refer to "Pneumatic Valves (CB-023SA)" for details on valve (P5136 Series).

Electrical specification for brake valve

Item	ULK-V- Bore size -VALVE-KIT- Voltage
Rated voltage (V)	AC100(50/60 Hz) AC200(50/60 Hz) DC24
Starting current (A)	0.056/0.044 0.034/0.026
Holding current (A)	0.028/0.022 0.017/0.013
Power consumption (W)	1.8/1.4 2.1/1.6 1.8
Voltage fluctuation range	±10%
Insulation class	Class B molded coil

*1: 100/200 VAC coil is available for 110/220 VAC (60 Hz).

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ø20	25/50/75/100/150 200/250/300	700	5
ø25			
ø32			
ø40			

*1: The custom stroke length is available in 1 mm increments.

*2: The min. stroke length varies depending on switch mounting method. Refer to the following table.

Min. stroke length with switch

(Unit: mm)

Switch quantity	1						2						3					
	Proximity			Reed			Proximity			Reed			Proximity			Reed		
	T2,T3	T1,T*Y	T*W	T0,T5	T8		T2,T3	T1,T*Y	T*W	T0,T5	T8		T2,T3	T1,T*Y	T*W	T0,T5	T8	
ø20	10						25	35	30	25	35		50	55	55	50	55	
ø25	10						25	35	30	25	35		50	55	55	50	55	
ø32	10						25	35	30	25	35		50	55	55	50	55	
ø40	10						25	35	30	25	35		50	55	55	50	55	

*1: Up to 3 switches can be mounted.

Switch specifications

- 1-color/2-color display

Item	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire						
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/ T3PV	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V		
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay	For programmable controller, relay, IC circuit (no indicator lamp), serial connection			For programmable controller, relay		
Output method	-				NPN output	PNP output	NPN output	NPN output	-						
Pwr. supp. V.	-				10 to 28 VDC				-						
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC
Load current	5 to 100 mA	5 to 20 mA (*3)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)		
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC	1 mA or less			10 µA or less				0 mA						
Weight g	1 m:33	1 m:18	1 m:33	1 m:18	1 m:18		1 m:33	1 m:18	1 m:18			1 m:33			
	3 m:87	3 m:49	3 m:87	3 m:49	3 m:49		3 m:87	3 m:49	3 m:49			3 m:87			
	5 m:142	5 m:80	5 m:142	5 m:80	5 m:80		5 m:142	5 m:80	5 m:80			5 m:142			

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

Cylinder weight

- ULK

Item/mounting	Product weight when stroke length (S) = 0 mm						Switch weight	Switch rail + band weight	Additional weight per S = 10 mm
	Basic (00)	Axial foot (LB)	Flange (FA)	Clevis (CA)	Clevis (CC)	Trunnion (TA/TB)			
Ø20	0.47	0.62	0.53	0.62	0.48	0.52	Refer to the weight in the switch specifications.	0.005	0.01
Ø25	0.84	1.10	0.99	1.08	0.84	0.94		0.005	0.01
Ø32	0.88	1.14	1.03	1.12	0.88	0.98		0.009	0.02
Ø40	1.47	1.73	1.62	1.71	1.49	1.63		0.009	0.02

- ULK-V (with valve for brake)

Item/mounting	Product weight when stroke length (S) = 0 mm						Switch weight	Switch rail + band weight	Additional weight per S = 10 mm
	Basic (00)	Axial foot (LB)	Flange (FA)	Clevis (CA)	Clevis (CC)	Trunnion (TA/TB)			
Ø20	0.53	0.68	0.59	0.68	0.54	0.58	Refer to the weight in the switch specifications.	0.005	0.01
Ø25	0.90	1.16	1.05	1.14	0.90	1.00		0.005	0.01
Ø32	0.94	1.20	1.09	1.18	0.94	1.04		0.009	0.02
Ø40	1.53	1.79	1.68	1.77	1.55	1.69		0.009	0.02

Theoretical thrust table

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Ø20	Push	47.1	62.8	94.2	1.26 × 10 ²	1.57 × 10 ²	1.88 × 10 ²	2.20 × 10 ²	2.51 × 10 ²	2.83 × 10 ²	3.14 × 10 ²
	Pull	35.3	47.1	70.7	94.2	1.18 × 10 ²	1.41 × 10 ²	1.65 × 10 ²	1.88 × 10 ²	2.12 × 10 ²	2.36 × 10 ²
Ø25	Push	73.6	98.2	1.47 × 10 ²	1.96 × 10 ²	2.45 × 10 ²	2.95 × 10 ²	3.44 × 10 ²	3.93 × 10 ²	4.42 × 10 ²	4.91 × 10 ²
	Pull	56.7	75.6	1.13 × 10 ²	1.51 × 10 ²	1.89 × 10 ²	2.27 × 10 ²	2.64 × 10 ²	3.02 × 10 ²	3.40 × 10 ²	3.78 × 10 ²
Ø32	Push	1.21 × 10 ²	1.61 × 10 ²	2.41 × 10 ²	3.22 × 10 ²	4.02 × 10 ²	4.83 × 10 ²	5.63 × 10 ²	6.43 × 10 ²	7.24 × 10 ²	8.04 × 10 ²
	Pull	1.04 × 10 ²	1.38 × 10 ²	2.07 × 10 ²	2.76 × 10 ²	3.46 × 10 ²	4.15 × 10 ²	4.84 × 10 ²	5.53 × 10 ²	6.22 × 10 ²	6.91 × 10 ²
Ø40	Push	1.88 × 10 ²	2.51 × 10 ²	3.77 × 10 ²	5.03 × 10 ²	6.28 × 10 ²	7.54 × 10 ²	8.80 × 10 ²	1.01 × 10 ³	1.13 × 10 ³	1.26 × 10 ³
	Pull	1.65 × 10 ²	2.21 × 10 ²	3.31 × 10 ²	4.41 × 10 ²	5.51 × 10 ²	6.62 × 10 ²	7.72 × 10 ²	8.82 × 10 ²	9.92 × 10 ²	1.10 × 10 ³

ULK/ULK-V Series

How to order

Without valve

Without switch (built-in magnet for switch)

ULK - 00 - 20 - 100 - V I

With switch (built-in magnet for switch)

ULK - 00 - 20 - 100 - T0H - R - V I

With valve for brake

Without switch (built-in magnet for switch)

ULK-V - 00 - 20 - 100 - 1 - V I

With switch (built-in magnet for switch)

ULK-V - 00 - 20 - 100 - 1 - T0H - R - V I

A Model No.

B Mounting

C Bore size

D Stroke length

E Valve voltage

F Switch model No.

Precautions for model No. selection

- *1 : Refer to page 680 for the min. stroke length with switch.
- *2 : The stroke length will be 25 mm and over with bellows "J". Contact CKD when stroke length is shorter than 25 mm.
- *3 : The instantaneous max. temperature is the temperature when sparks, cutting chips, etc., instantaneously contact the bellows.
- *4 : "I" and "Y" cannot be selected together.
- *5 : Up to three switches can be installed. If four or more switches are required, switch mounting brackets for the extra switches must be prepared separately.
- *6 : Refer to Ending Page 85 for custom specifications of rod end form.

[Example of model No.]

ULK-V-LB-20-100-1-T0H-R-JI

Model:Brake cylinder

- A Model No. : Double acting/With valve for brake
- B Mounting : Axial foot
- C Bore size : ø20 mm
- D Stroke length : 100 mm
- E Valve voltage : 100 VAC(50/60 Hz)
- F Switch model No. : Reed T0H switch
- G Switch quantity : 1 on rod side
- H Option : Bellows material, max. ambient temperature 100°C, instantaneous max. temperature 200°C
- I Accessory : Rod eye

G Switch quantity
*5

H Option
*3

I Accessory
*4

A Model No.

Double acting

Double acting/
with valve -Y

Code	Description	Double acting	Double acting/ with valve -Y
B Mounting			
00	Basic	●	●
LB	Axial foot	●	●
FA	Rod side flange	●	●
CA	Eye bracket	●	●
CC	Eye bracket integrated	●	●
CC1	Eye bracket bush pressfit	●	●
TA	Rod side trunnion	●	●
TB	Head side trunnion	●	●

C Bore size (mm)			
20	ø20	●	●
25	ø25	●	●
32	ø32	●	●
40	ø40	●	●

D Stroke length (mm)			
Bore size	Stroke length *1	Custom stroke length	
ø20	5 to 700	In 1 mm increments	
ø25	5 to 700		
ø32	5 to 700		
ø40	5 to 700		

E Valve voltage			
1	100 VAC(50/60 Hz)	●	●
2	200 VAC(50/60 Hz)	●	●
3	24 VDC	●	●

F Switch model No.					
Axial lead wire	Radial lead wire	Contact	Voltage		Lead wire
			AC	DC	
T0H*	T0V*	Reed	●	●	1-color display Without indicator lamp
T5H*	T5V*		●	●	
T8H*	T8V*		●	●	2-wire
T1H*	T1V*	Proximity	●	●	1-color display
T2H*	T2V*		●	●	2-wire
T3H*	T3V*		●	●	3-wire
T2WH*	T2WV*		●	●	2-color display
T2YH*	T2YV*		●	●	
T3WH*	T3WV*		●	●	
T3YH*	T3YV*		●	●	3-wire
T3PH*	T3PV*		●	●	1-color display
T2JH*	T2JV*		●	●	1-color display off-delay

* Lead wire length			
Blank	1 m (standard)	●	●
3	3 m (option)	●	●
5	5 m (option)	●	●

G Switch quantity			
R	1 on rod side	●	●
H	1 on head side	●	●
D	2	●	●
T	3	●	●

H Option			
		Max. ambient temperature	instantaneous max. temp
J	Bellows	100°C	200°C
L	Bellows	250°C	400°C
M	Piston rod material (stainless steel)	●	●
V	Boss cutoff	●	●

I Accessory			
I	Rod eye	●	●
Y	Rod clevis (pin, washer, split pin attached)	●	●
B2	Clevis bracket (pin, snap ring attached)	●	●

How to order switch

- Switch body + mounting bracket set

ULK - T0H - 20

Switch model No.
(Item ⑥ on page 682)

Bore size
(Item ③ on page 682)

- Switch body only

SW - T0H

Switch model No.
(Item ⑥ on page 682)

- Mounting bracket set

ULK - T - 20

Mounting bracket

Bore size
(Item ③ on page 682)

How to order brake valve only

ULK-V - ③ Bore size - VALVE-KIT - ⑤ Valve voltage

How to order brake unit only

ULK - ③ Bore size - BRAKE-UNIT

How to order mounting bracket

Bore size (mm)	ø20	ø25	ø32	ø40
Mounting bracket				
Basic (00) *3	M1-00-20	M1-00-30	M1-00-30	M1-00-30
Axial foot (LB)	M1-LB-20	M1-LB-30	M1-LB-30	M1-LB-30
Flange (FA)	M1-FA-20	M1-FA-30	M1-FA-30	M1-FA-30
Eye bracket (CA)	M1-CA-20	M1-CA-30	M1-CA-30	M1-CA-30
Trunnion (TA/TB)	M1-TA-20	M1-TA-30	M1-TA-30	M1-TA-40

*1: As for mounting brackets, the axial foot and flange include mounting nuts and toothed washers, and the trunnion includes mounting nuts.

2: For axial foot, 2 sets of the above "M1-LB-" are required.

*3: Mounting nut, toothed washer only. Although 1 set is attached with the basic of the product (00), use this when needed.

Specifications for rechargeable battery (Catalog No. CC-1226A)

ULK - ... - P4*

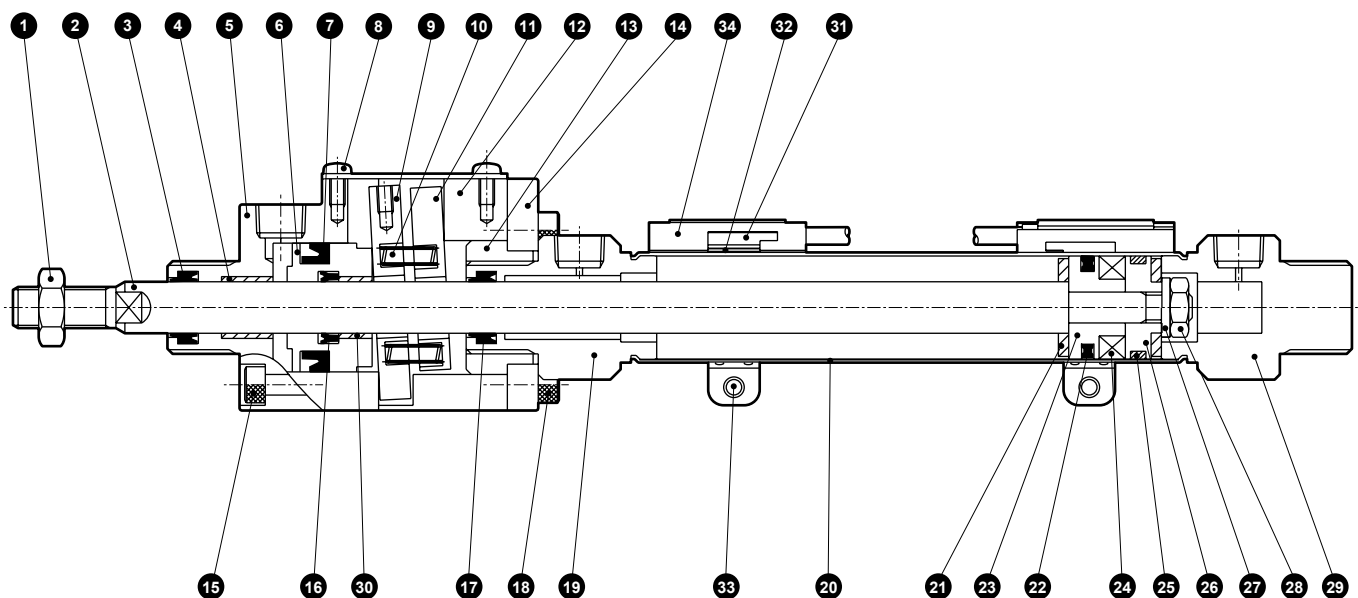
- Design compatible with rechargeable battery manufacturing process.

* Contact CKD for details.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

ULK/ULK-V Series

Internal structure and parts list



Cannot be disassembled

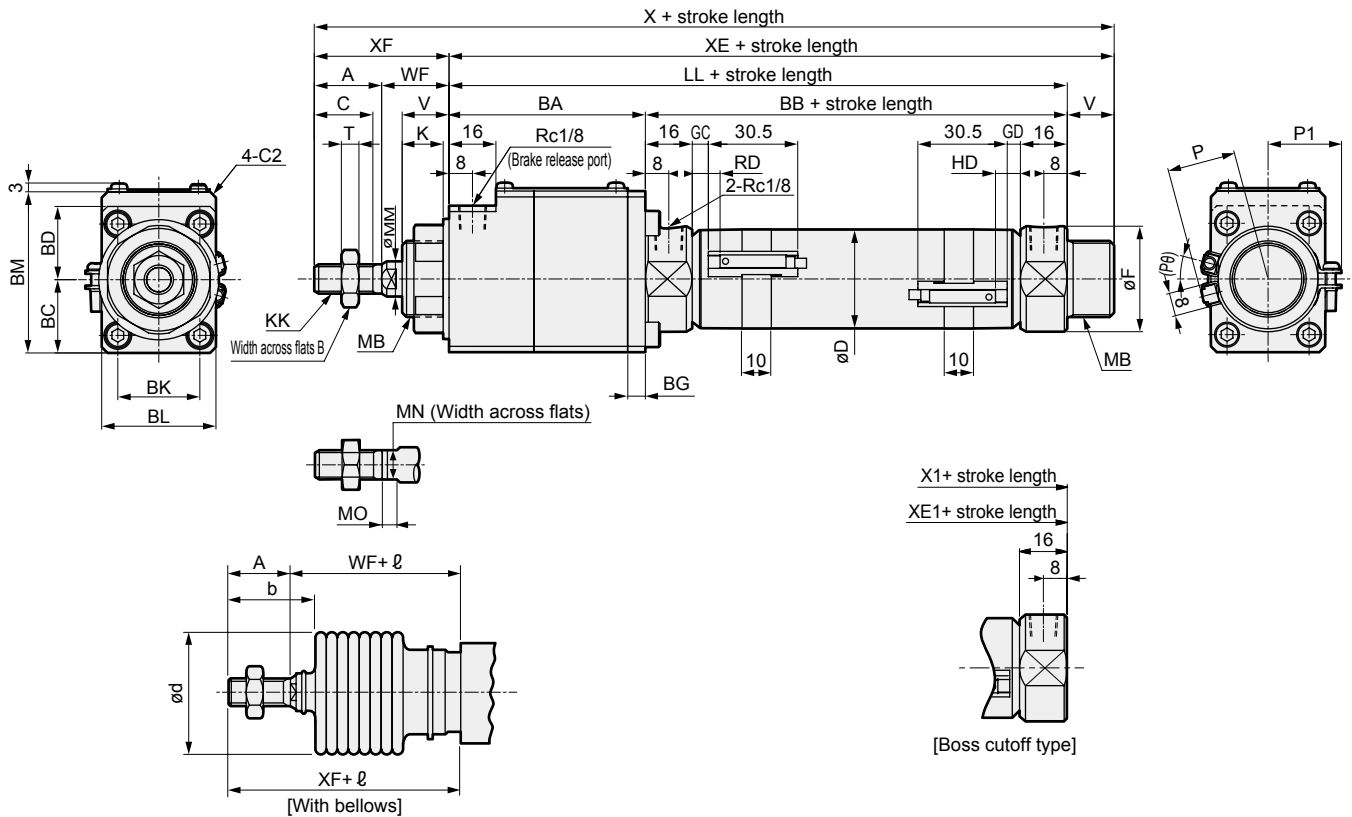
* This product cannot be disassembled.

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Rod nut	Steel	Zinc chromate	18	Hexagon socket head cap screw	Steel	Black finish
2	Piston rod	ø20/ø25: stainless steel ø32/ø40: steel	Industrial chrome plating	19	Rod cover	Aluminum alloy	
3	Brake rod packing	Nitrile rubber		20	Cylinder tube	Stainless steel	
4	Bearing	Acetal resin		21	Cushion rubber	Urethane rubber	
5	Body A	Aluminum alloy	Alumite	22	Piston packing	Nitrile rubber	
6	Release piston	Aluminum alloy	Alumite	23	Piston A	Aluminum alloy	
7	Release piston packing	Nitrile rubber		24	Magnet	Plastic	
8	Pan head machine screw	Steel		25	Wear ring	Acetal resin	
9	Brake plate A	Special steel	Zinc chromate	26	Piston B	Aluminum alloy	
10	Brake spring	Piano wire	Black finish	27	Spacer	Steel	
11	Brake plate B	Special steel	Zinc chromate	28	Hexagon nut	Steel	Zinc chromate
12	Body B	Aluminum alloy	Alumite	29	Head cover	Aluminum alloy	
13	Fixing nut	Steel	Zinc chromate	30	Release rod metal	Acetal resin	
14	Brake flange	Steel	Zinc chromate	31	Switch body		
15	Hexagon socket head cap screw	Steel	Black finish	32	Band	Stainless steel	
16	Release rod packing	Nitrile rubber		33	Pan head machine screw	Stainless steel	
17	Rod packing	Nitrile rubber		34	Switch rail	Stainless steel	

Dimensions



● Basic (00)



RD: Rod side max. sensitivity position

HD: Head side max. sensitivity position

1 : Refer to page 693 for HD, RD and protruding dimensions of T1, T8* and 2-color display switches.

*2 : For the ℓ dimension, round up below the decimal point.

*3 : For the dimensions of the accessories, refer to page 694.

Code	Basic (00) basic dimensions													
Bore size (mm)	A	B	BA	BB	BC	BD	BG	BK	BL	BM	C	D	F	K
ø20	20	13	58	66	20	20	6	20	29	45	18	21.4	28	12
ø25	23	17	67	69	25	25	6	28	39	55	20	26.4	32	14
ø32	23	17	67	69	25	25	6	28	39	55	20	33.6	36	14
ø40	25	19	74	73	29	30	9	39	50	69	22	41.6	45	14

Code													With switch (T0, T5, T2, T3)				
Bore size (mm)	KK		LL	MB	MM	MN	MO	T	V	WF	X	XE	XF	GC	GD	RD	HD
ø20	M8×1.0		124	M18×1.5	10	8	5	5	14	24	182	138	44	4.0	3.0	8.0	7.0
ø25	M10×1.25		136	M26×1.5	12	10	5	6	16	23	198	152	46	5.5	4.5	9.5	8.5
ø32	M10×1.25		136	M26×1.5	12	10	5	6	16	23	198	152	46	5.5	4.5	9.5	8.5
ø40	M12×1.5		147	M26×1.5	14	12	6	7	16	23	211	163	48	7.5	6.5	11.5	10.5

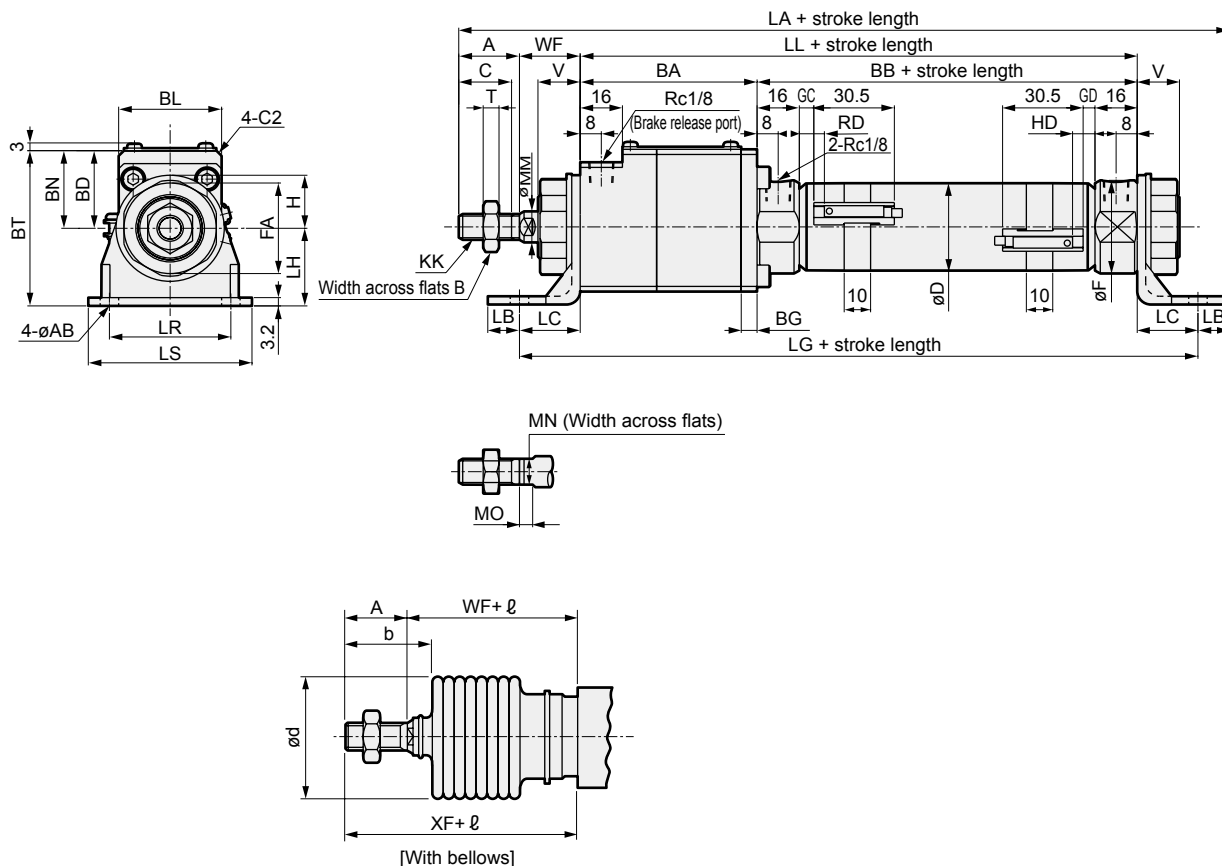
Code	With switch (T2W, T3W)							With bellows				Boss cutoff type	
Bore size (mm)	GC	GD	RD	HD	P	P1	(P8)°	b	d	ℓ		X1	XE1
ø20	6.0	5.0	10.0	9.0	17.3	19.5	22	30	30	(Stroke length/3) + 6		168	124
ø25	7.5	6.5	11.5	10.5	19.8	22.0	18	32	46	(Stroke length/3.25) + 7		182	136
ø32	7.5	6.5	11.5	10.5	24.3	25.5	15	32	46	(Stroke length/3.25) + 7		182	136
ø40	9.5	8.5	13.5	12.5	28.3	29.5	12	34	46	(Stroke length/3.25) + 7		195	147

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions



● Axial foot (LB)



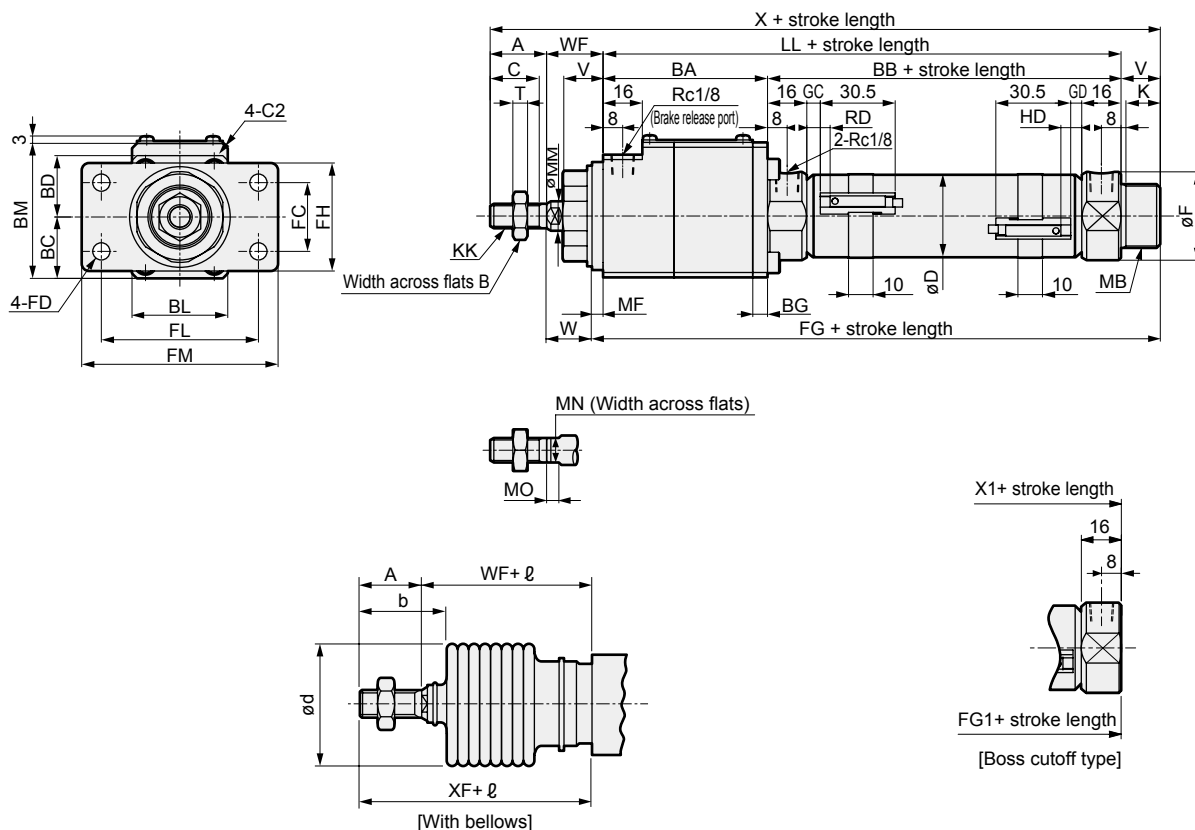
1 : Refer to page 693 for HD, RD and protruding dimensions of T1, T8* and 2-color display switches.

*2 : For the ℓ dimension, round up below the decimal point.

*3 : For the dimensions of the accessories, refer to page 694.

Code	Axial foot (LB) basic dimensions																	
Bore size	A	AB	B	BA	BB	BD	BG	BL	BN	BT	C	D	F	FA	H	KK		
ø20	20	6	13	58	66	20	6	29	25	50	18	21.4	28	26	15	M8×1.0		
ø25	23	7	17	67	69	25	6	39	30	60	20	26.4	32	35	20	M10×1.25		
ø32	23	7	17	67	69	25	6	39	30	60	20	33.6	36	35	20	M10×1.25		
ø40	25	7	19	74	73	30	9	50	40	70	22	41.6	45	35	20	M12×1.5		
Code								Mounting dimensions							With switch (T0, T5, T2, T3)			
Bore size	LL	MM	MN	MO	T	V	WF	LA	LB	LC	LG	LH	LR	LS	GC	GD	RD	HD
ø20	124	10	8	5	5	14	24	196	10	18	160	25	30	44	4.0	3.0	8.0	7.0
ø25	136	12	10	5	6	16	23	217	12	23	182	30	46	62	5.5	4.5	9.5	8.5
ø32	136	12	10	5	6	16	23	217	12	23	182	30	46	62	5.5	4.5	9.5	8.5
ø40	147	14	12	6	7	16	23	230	12	23	193	30	46	62	7.5	6.5	11.5	10.5
Code	With switch (T2W, T3W)				With bellows													
Bore size (mm)	GC	GD	RD	HD	XF	b	d	ℓ										
ø20	6.0	5.0	10.0	9.0	44	30	30	(Stroke length/3) + 6										
ø25	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7										
ø32	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7										
ø40	9.5	8.5	13.5	12.5	48	34	46	(Stroke length/3.25) + 7										

- Rod side flange (FA)



1 : Refer to page 693 for HD, RD and protruding dimensions of T1, T8* and 2-color display switches.

*2 : For the ℓ dimension, round up below the decimal point.

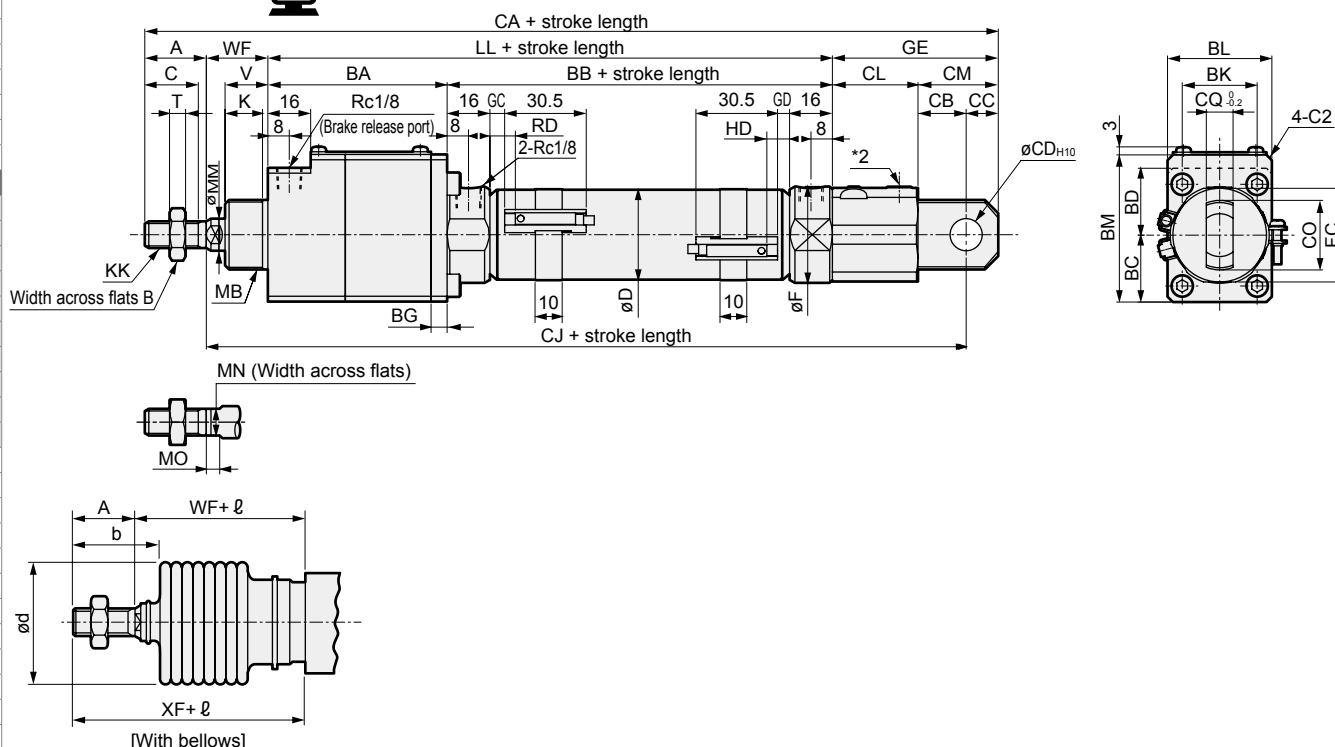
*3 : For the dimensions of the accessories, refer to page 694.

Code	Rod side flange (FA) basic dimensions																		
Bore size (mm)	A	B	BA	BB	BC	BD	BG	BL	BM	C	D	F	K	KK	LL	MB			
ø20	20	13	58	66	20	20	6	29	45	18	21.4	28	12	M8×1.0	124	M18×1.5			
ø25	23	17	67	69	25	25	6	39	55	20	26.4	32	14	M10×1.25	136	M26×1.5			
ø32	23	17	67	69	25	25	6	39	55	20	33.6	36	14	M10×1.25	136	M26×1.5			
ø40	25	19	74	73	29	30	9	50	69	22	41.6	45	14	M12×1.5	147	M26×1.5			
Code										Mounting dimensions						With switch (T0, T5, T2, T3)			
Bore size (mm)	MF	MM	MN	MO	T	V	W	WF	X	FC	FD	FG	FH	FL	FM	GC	GD	RD	HD
ø20	3.2	10	8	5	5	14	20.8	24	182	20	6	141.2	34	40	54	4.0	3.0	8.0	7.0
ø25	4.5	12	10	5	6	16	18.5	23	198	28	7	156.5	44	64	80	5.5	4.5	9.5	8.5
ø32	4.5	12	10	5	6	16	18.5	23	198	28	7	156.5	44	64	80	5.5	4.5	9.5	8.5
ø40	4.5	14	12	6	7	16	18.5	23	211	28	7	167.5	44	64	80	7.5	6.5	11.5	10.5
Code	With switch (T2W, T3W)				With bellows						Boss cutoff type								
Bore size (mm)	GC	GD	RD	HD	XF	b	d	ℓ			X1		FG1						
ø20	6.0	5.0	10.0	9.0	44	30	30	(Stroke length/3) + 6			168		127.2						
ø25	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7			182		140.5						
ø32	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7			182		140.5						
ø40	9.5	8.5	13.5	12.5	48	34	46	(Stroke length/3.25) + 7			195		151.5						

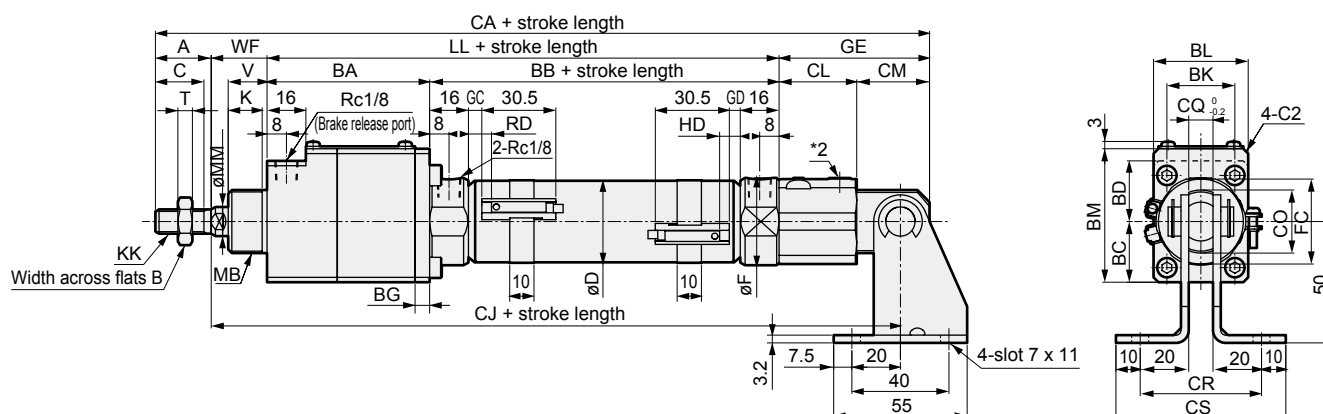
LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechInd/Chuk
ShkAbs
FJ
FK
SpdContr

Dimensions

● Eye bracket (CA)



● With bracket (Option B2)



1 : Refer to page 693 for HD, RD and protruding dimensions of T1, T8* and 2-color display switches.

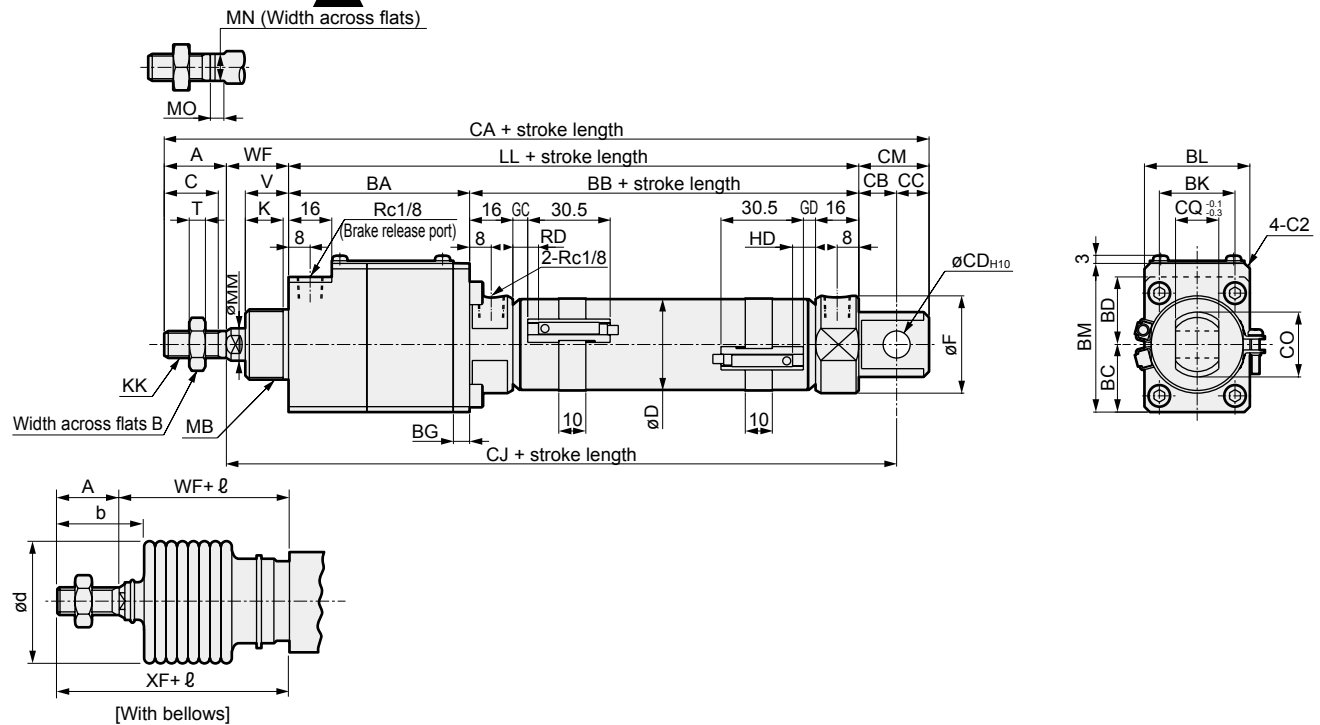
*2 : Not piping port. *3 : For the ℓ dimension, round up below the decimal point.

*4 : For the dimensions of the accessories, refer to page 694.

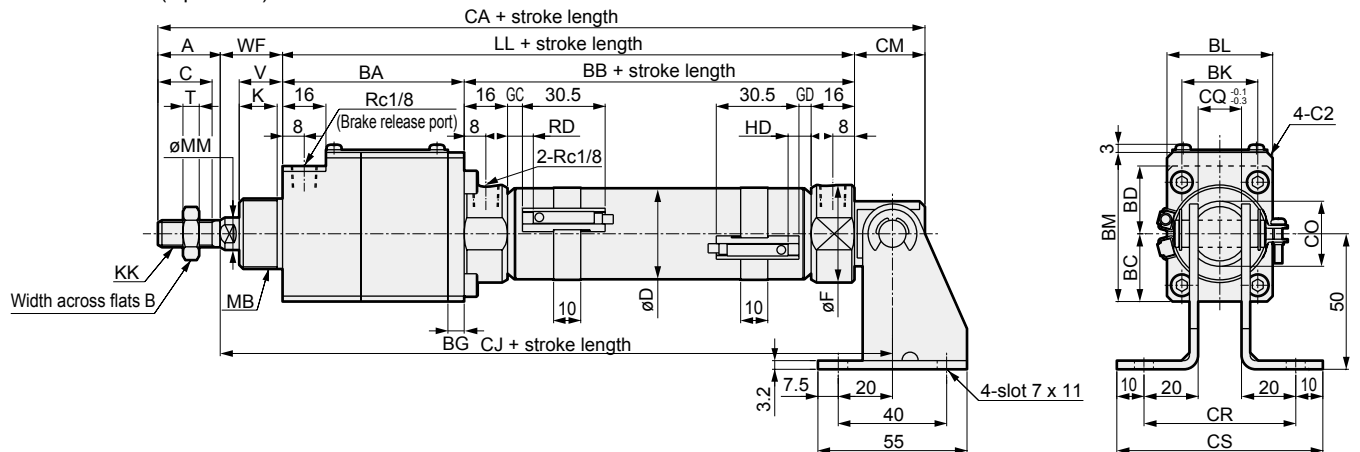
Code	Eye bracket (CA) basic dimensions																						
Bore size (mm)	A	B	BA	BB	BC	BD	BG	BK	BL	BM	C	D	F	FC	GE	K	KK	LL	MB				
ø20	20	13	58	66	20	20	6	20	29	45	18	21.4	28	26	55	12	M8×1.0	124	M18×1.5				
ø25	23	17	67	69	25	25	6	28	39	55	20	26.4	32	35	62	14	M10×1.25	136	M26×1.5				
ø32	23	17	67	69	25	25	6	28	39	55	20	33.6	36	35	62	14	M10×1.25	136	M26×1.5				
ø40	25	19	74	73	29	30	9	39	50	69	22	41.6	45	35	62	14	M12×1.5	147	M26×1.5				
Code							Mounting dimensions												With switch (T0, T5, T2, T3)				
Bore size (mm)	MM	MN	MO	T	V	WF	CA	CB	CC	CD	CJ	CL	CM	CO	CQ	CR	CS	GC	GD	RD	HD		
ø20	10	8	5	5	14	24	223	14	10	10	193	31	24	22	8	48	68	4.0	3.0	8.0	7.0		
ø25	12	10	5	6	16	23	244	18	12	12	209	32	30	26	10	50	70	5.5	4.5	9.5	8.5		
ø32	12	10	5	6	16	23	244	18	12	12	209	32	30	26	10	50	70	5.5	4.5	9.5	8.5		
ø40	14	12	6	7	16	23	257	18	12	12	220	32	30	26	10	50	70	7.5	6.5	11.5	10.5		
Code	With switch (T2W, T3W)					With bellows																	
Bore size (mm)	GC	GD	RD	HD	XF	b	d	ℓ															
ø20	6.0	5.0	10.0	9.0	44	30	30	(Stroke length/3) + 6															
ø25	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7															
ø32	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7															
ø40	9.5	8.5	13.5	12.5	48	34	46	(Stroke length/3.25) + 7															

Dimensions

● Eye bracket integrated (CC)



● With bracket (Option B2)



1 : Refer to page 693 for HD, RD and protruding dimensions of T1, T8* and 2-color display switches.

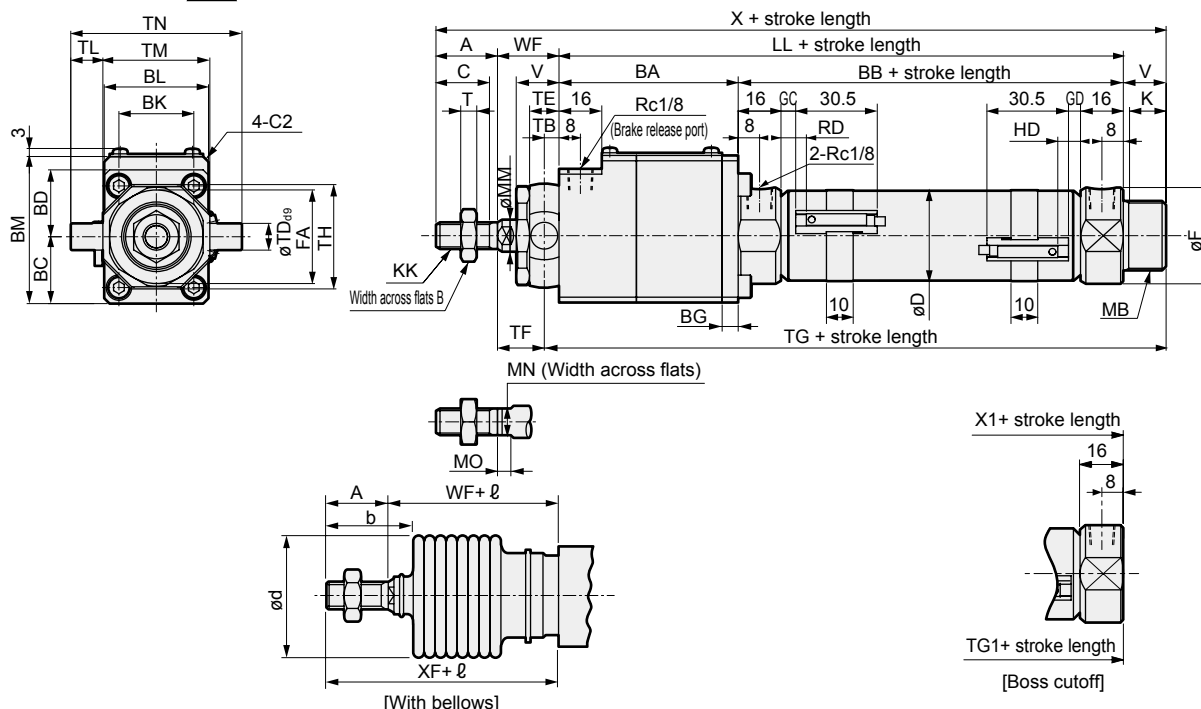
*2 : For the ℓ dimension, round up below the decimal point.

*3 : For the dimensions of the accessories, refer to page 694.

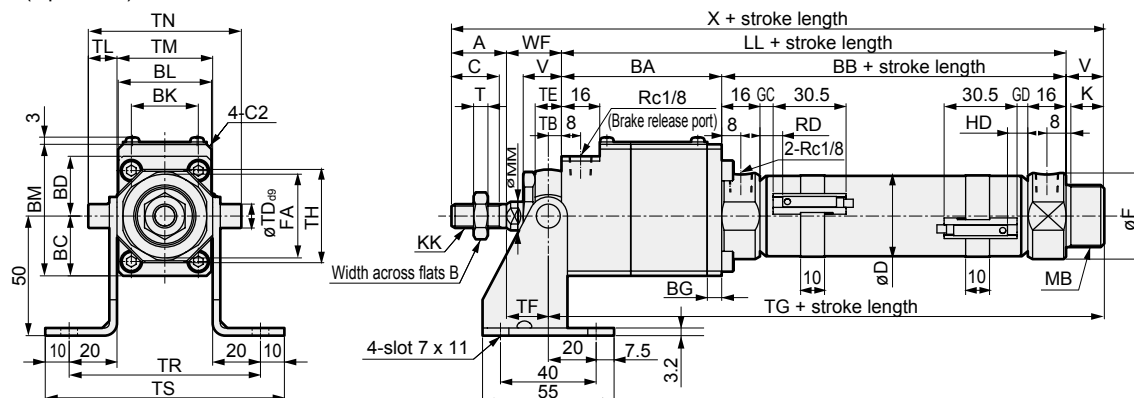
Code	Eye bracket integrated (CC) basic dimensions															
Bore size (mm)	A	B	BA	BB	BC	BD	BG	BK	BL	BM	C	D	F	K	KK	LL
ø20	20	13	58	66	20	20	6	20	29	45	18	21.4	28	12	M8×1.0	124
ø25	23	17	67	69	25	25	6	28	39	55	20	26.4	32	14	M10×1.25	136
ø32	23	17	67	69	25	25	6	28	39	55	20	33.6	36	14	M10×1.25	136
ø40	25	19	74	73	29	30	9	39	50	69	22	41.6	45	14	M12×1.5	147
Code	Mounting dimensions															
Bore size (mm)	MB	MM	MN	MO	T	V	WF	CA	CB	CC	CD	CJ	CM	CO	CQ	CR
ø20	M18×1.5	10	8	5	5	14	24	189	12	9	8	160	21	22	16	56
ø25	M26×1.5	12	10	5	6	16	23	203	12	9	8	171	21	24	16	56
ø32	M26×1.5	12	10	5	6	16	23	208	14	12	10	173	26	24	16	56
ø40	M26×1.5	14	12	6	7	16	23	225	16	14	12	186	30	30	20	60
Code	With switch (T0, T5, T2, T3)								With bellows							
Bore size (mm)	GC	GD	RD	HD	XF	b	d	ℓ	GC	GD	RD	HD	XF	b	d	ℓ
ø20	6.0	5.0	10.0	9.0	44	30	30	(Stroke length/3) + 6	6.0	5.0	10.0	9.0	44	30	30	(Stroke length/3) + 6
ø25	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7
ø32	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7
ø40	9.5	8.5	13.5	12.5	48	34	46	(Stroke length/3.25) + 7	9.5	8.5	13.5	12.5	48	34	46	(Stroke length/3.25) + 7

Dimensions

● Rod side trunnion (TA)



● With bracket (Option B2)



1 : Refer to page 693 for HD, RD and protruding dimensions of T1, T8* and 2-color display switches.

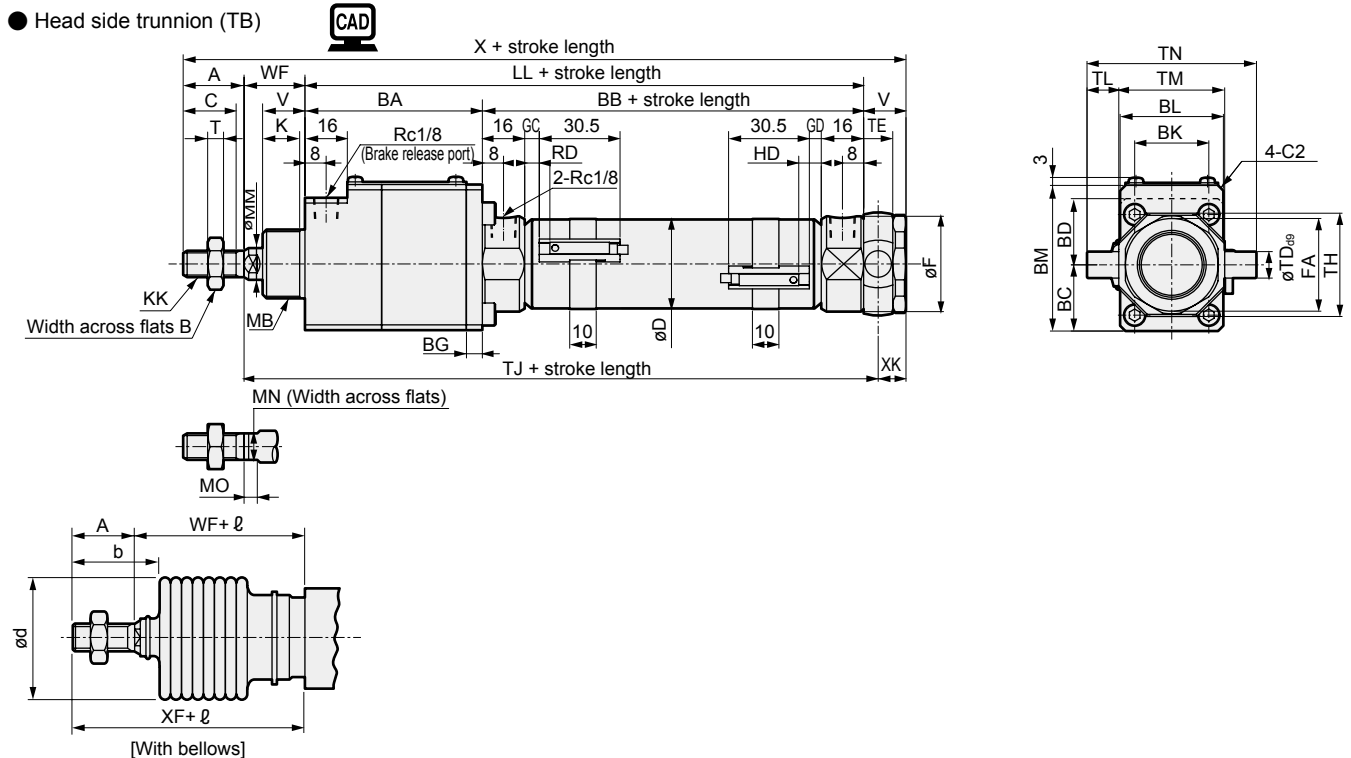
*2 : For the ℓ dimension, round up below the decimal point.

*3 : For the dimensions of the accessories, refer to page 694.

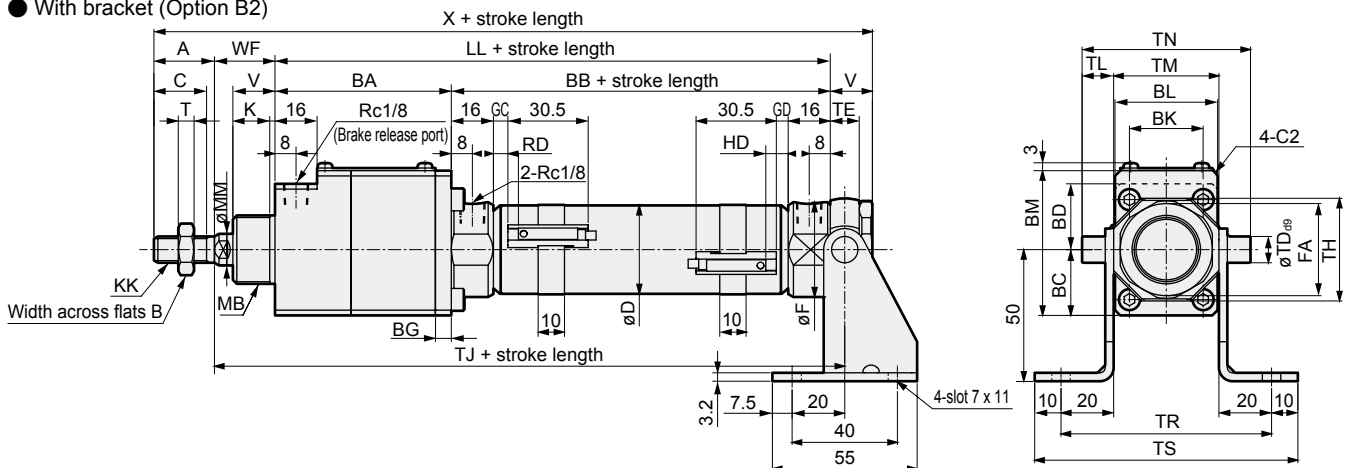
Code	Rod side trunnion (TA) basic dimensions																	
Bore size (mm)	A	B	BA	BB	BC	BD	BG	BK	BL	BM	C	D	F	FA	K	KK	LL	MB
$\phi 20$	20	13	58	66	20	20	6	20	29	45	18	21.4	28	26	12	M8×1.0	124	M18×1.5
$\phi 25$	23	17	67	69	25	25	6	28	39	55	20	26.4	32	35	14	M10×1.25	136	M26×1.5
$\phi 32$	23	17	67	69	25	25	6	28	39	55	20	33.6	36	35	14	M10×1.25	136	M26×1.5
$\phi 40$	25	19	74	73	29	30	9	39	50	69	22	41.6	45	35	14	M12×1.5	147	M26×1.5
Code	Mounting dimensions																	
Bore size (mm)	MM	MN	MO	T	V	WF	X	TB	TD	TE	TF	TG	TH	TL	TM	TN	TR	TS
$\phi 20$	10	8	5	5	14	24	182	4.5	8	9	19.5	142.5	29.5	8	30	46	70	90
$\phi 25$	12	10	5	6	16	23	198	5.5	10	11	17.5	157.5	39	12	40	64	80	100
$\phi 32$	12	10	5	6	16	23	198	5.5	10	11	17.5	157.5	39	12	40	64	80	100
$\phi 40$	14	12	6	7	16	23	211	5.5	10	11	17.5	168.5	44	9.5	53	72	93	113
Code	With switch (T2W, T3W)										Boss cutoff							
Bore size (mm)	GC	GD	RD	HD	XF	b	d	ℓ			X1	TG1						
$\phi 20$	6.0	5.0	10.0	9.0	44	30	30	(Stroke length/3) + 6			168	128.5						
$\phi 25$	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7			182	141.5						
$\phi 32$	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7			182	141.5						
$\phi 40$	9.5	8.5	13.5	12.5	48	34	46	(Stroke length/3.25) + 7			195	152.5						

Dimensions

● Head side trunnion (TB)



● With bracket (Option B2)



1 : Refer to page 693 for HD, RD and protruding dimensions of T1, T8* and 2-color display switches.

*2 : For the ℓ dimension, round up below the decimal point.

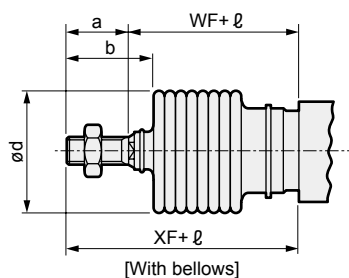
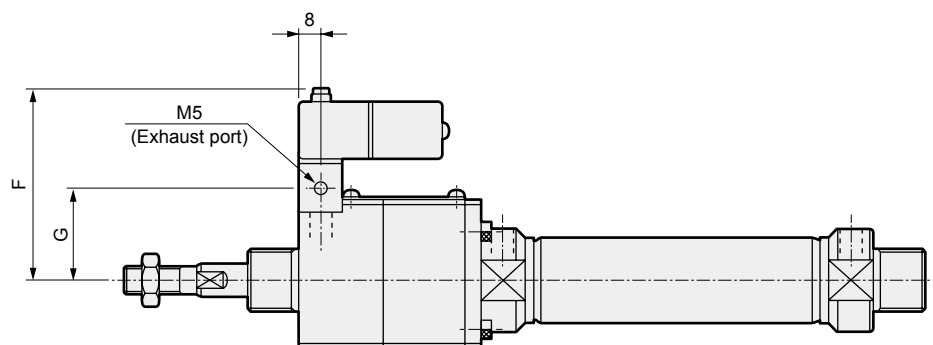
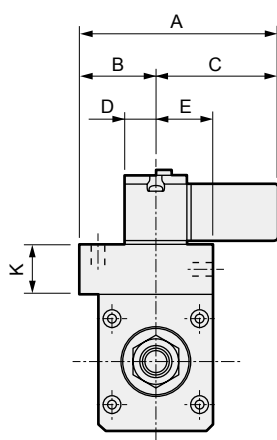
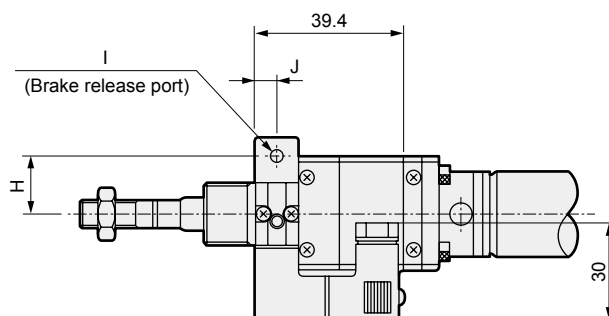
*3 : For the dimensions of the accessories, refer to page 694.

Code	Rod side flange (TB) basic dimensions																								
Bore size (mm)	A	B	BA	BB	BC	BD	BG	BK	BL	BM	C	D	F	FA	K	KK	LL	MB							
ø20	20	13	58	66	20	20	6	20	29	45	18	21.4	28	26	12	M8×1.0	124	M18×1.5							
ø25	23	17	67	69	25	25	6	28	39	55	20	26.4	32	35	14	M10×1.25	136	M26×1.5							
ø32	23	17	67	69	25	25	6	28	39	55	20	33.6	36	35	14	M10×1.25	136	M26×1.5							
ø40	25	19	74	73	29	30	9	39	50	69	22	41.6	45	35	14	M12×1.5	147	M26×1.5							
Code										Mounting dimensions									With switch (T0, T5, T2, T3)						
Bore size (mm)	MM	MN	MO	T	V	WF	X	XK	TD	TE	TH	TJ	TL	TM	TN	TR	TS	GC	GD	RD	HD				
ø20	10	8	5	5	14	24	182	9.5	8	9	29.5	152.5	8	30	46	70	90	4.0	3.0	8.0	7.0				
ø25	12	10	5	6	16	23	198	10.5	10	11	39	164.5	12	40	64	80	100	5.5	4.5	9.5	8.5				
ø32	12	10	5	6	16	23	198	10.5	10	11	39	164.5	12	40	64	80	100	5.5	4.5	9.5	8.5				
ø40	14	12	6	7	16	23	211	10.5	10	11	44	175.5	9.5	53	72	93	113	7.5	6.5	11.5	10.5				
Code	With switch (T2W, T3W)				With bellows																				
Bore size (mm)	GC	GD	RD	HD	XF	b	d	ℓ																	
ø20	6.0	5.0	10.0	9.0	44	30	30	(Stroke length/3) + 6																	
ø25	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7																	
ø32	7.5	6.5	11.5	10.5	46	32	46	(Stroke length/3.25) + 7																	
ø40	9.5	8.5	13.5	12.5	48	34	46	(Stroke length/3.25) + 7																	

Dimensions



● With valve for brake



*Dimensions not listed below are the same as the basic type on page 685.

*1 : For the l dimension, round up below the decimal point.

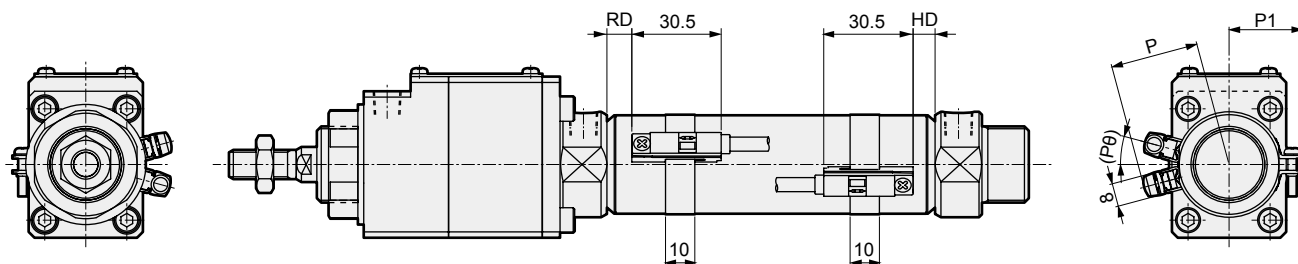
*2 : For the dimensions of the accessories, refer to page 694.

Code	A	B	C	D	E	F	G	H	I	J	K
Bore size (mm)											
ø20	56.5	25	31.5	8	15	54	26.5	17	M5	8	12
ø25	57	21	36	4	18	60	31	16	Rc1/8	9	13
ø32	57	21	36	4	18	60	31	16	Rc1/8	9	13
ø40	57	24	33	7	18	65	36	16	Rc1/8	9	13

Code	With bellows					
Bore size (mm)	a	WF	XF	b	d	l
ø20	20	24	44	30	30	(Stroke length/3) + 6
ø25	23	23	46	32	46	(Stroke length/3.25) + 7
ø32	23	23	46	32	46	(Stroke length/3.25) + 7
ø40	25	23	48	34	46	(Stroke length/3.25) + 7

ULK Series common dimensions (with T1, T8 switches, with 2-color display switch)

● ULK-**-**-T1H/V, T8H/V, T₃²YH/V



Switch installation dimensions

Code	1-color display (T1, T8) 2-color display (T ₃ ² Y)							
	RD		HD		P		P1	(P0)°
	T1, T ₃ ² Y	T8	T1, T ₃ ² Y	T8	T1	T ₃ ² Y, T8		
Bore size (mm)								
ø20	7.0	2.0	6.0	1	28.5	23.1	19.5	22
ø25	8.5	3.5	7.5	2.5	31.0	25.6	22.0	18
ø32	8.5	3.5	7.5	2.5	35.5	30.1	25.5	15
ø40	10.5	5.5	9.5	4.5	39.5	34.1	29.5	12

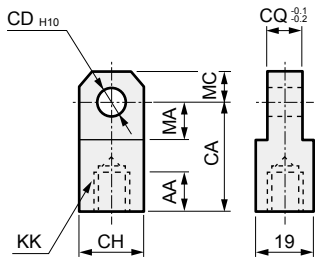
LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Accessory dimensions (rod/bracket/pin) with bellows

● Rod eye (I)



Material: Steel
Zinc chromate treatment

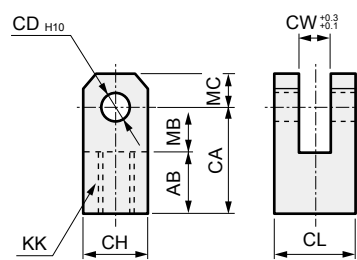


Model No.	Applicable bore size (mm)	AA	CA	CD	CH	CQ	KK	MA	MC	Wt (g)
M1-I-20	20	14	30	10	19	8	M8×1.0	13	10	60
M1-I-30	25/32	14	36	12	25	10	M10×1.25	16	12	106
M1-I-40	40	14	36	12	25	10	M12×1.5	16	12	100

● Rod clevis (Y)



Material: Steel
Zinc chromate treatment



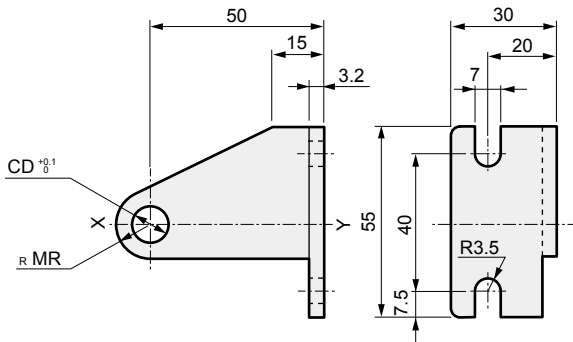
A pin, a washer, and a split pin are attached.

Model No.	Applicable bore size (mm)	AB	CA	CD	CH	CL	CW	KK	MB	MC	Wt (g)
M1-Y-20	20	17	30	10	19	19	8	M8×1.0	13	10	99
M1-Y-30	25/32	20	36	12	25	25	10	M10×1.25	16	12	197
M1-Y-40	40	20	36	12	25	25	10	M12×1.5	16	12	193

● Clevis bracket (B2)



Material: Steel, zinc chromate treatment



Model No.	Compatibility	Applicable bore size (mm)	CD	MR	Weight (g)
M1-B2-20-CC	ULK-CC	20/25	8	8	145
M1-B2-30-CC		32	10	11	163
M1-B2-40-CC		40	12	11	170
M1-B2-30-CA	ULK-CA	20	10	11	158
M1-B2-40-CA		25/32/40	12	11	162
M1-B2-20-TA	ULK-TA/TB	20	8	8	132
M1-B2-30-TA		25/32/40	10	11	142

*1: One pair is composed of two pieces with XY symmetry.

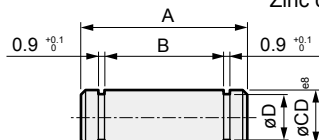
*2: The model No. above includes snap ring and pin. 2 pieces are included in a set.

(However, the pin and snap rings are not included with the trunnion.)

● Clevis bracket pin (P1) (P2)

Material: Steel

Zinc chromate treatment



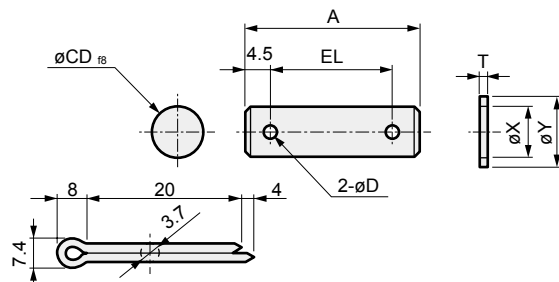
Model No.	Compatible Bore size model and (mm)	A	B	CD	D	Applicable snap ring	Weight (g)
M1-P1-20	ULK-CC-20/25	33	28	8	7	E type 7	13
M1-P1-30	ULK-CC-32	33	28	10	9	E type 9	21
M1-P1-40	ULK-CC-40	37	32	12	9	E type 9	32
M1-P2-20	ULK-CA-20	25	20	10	9	E type 9	16
M1-P2-30	ULK-CA-25/32/40	27	22	12	9	E type 9	24

Note : A pin and snap ring for bracket use are attached with the product.

(However, the pin and snap rings are not included with the trunnion.)

● Rod clevis pin (P)

Material: Steel, zinc chromate treatment



Model No.	Applicable bore size (mm)	A	D	CD	EL	T	X	Y	Weight (g)
M1-P-20	20	37	4	10	28	2	10.5	18	29
M1-P-30	25/32/40	46	4	12	37	2.5	12.5	22	50

Note : A pin, a washer and a split pin for rod clevis use are attached with the product.